

DETAILED ACTION

This Office action is in response to the amendment to the claims filed 17 December 2010.

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1, 5 and 9-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nguyen (US Patent 7,036,091) in view of Mitchell et al (US Patent 6,628,304), hereinafter Mitchell, further in view of Robbins (US Patent 6,819,344 B2), further in view of Torres (US Patent 5,317,687), further in view of Vayda et al (US Patent 5,745,717), hereinafter Vayda, further in view of Os et al (US Patent 6,781,610), hereinafter Os, further in view of Tanaka et al (US Patent 6,544,123), hereinafter Tanaka, and further in view of Land et al (US Patent 7,155,676), hereinafter Land.

As to independent claims 1 and 5, Nguyen teaches: displaying on a display device a first ring on a picture screen and primary icons at predetermined intervals on the first ring (i.e. ring as menu 420, with icons as options 424, see col. 7, lines 64-67 on TV 104); causing rotation, by a processor, to the primary icons on the first ring while maintaining an order of arrangement (i.e. see col. 8, lines 13-23); highlighting a first icon of the primary icons while also displaying a second icon of the primary icons corresponding to an operation, and highlighting a second icon corresponding to an operation (see col. 8 lines 29-40, and seen in Fig. 4), and selecting the highlighted second icon at (col. 8, lines 29-33).

Nguyen fails to explicitly teach the second icon being encircled by a second ring that does not encircle the first icon, the second icon being within a space encircled by the second ring, wherein the second ring that encircles the second icon is of a smaller diameter than the first ring, wherein the first ring and second ring are different levels of a hierarchical menu, and adding second icons, upon selecting the highlighted icon, at predetermined intervals on the second ring, the second icons corresponding to secondary operations of the operation.

Mitchell teaches a method and apparatus for navigating hierarchical structures, similar to that of Nguyen. Furthermore, Mitchell teaches a second icon being surrounded by a second ring that does not surround the first icon (taught as the hierarchical ring structures of Figs. 3-6, that include selectable icons surrounding each larger icon, at col. 8, lines 1-34), wherein the second ring that surrounds the second icon is of a smaller diameter than the first ring (as can be seen in Figs. 3-6), wherein the first ring and second ring are different levels of a hierarchical menu (taught as the parent node/child node relationships of the hierarchy, at col. 8, lines 20-34), and adding second icons, upon selecting the highlighted icon, at predetermined intervals on the second ring, the second icons corresponding to secondary operations of the operation (taught as the displaying of previously not displayed child icons upon selection of a node, at col. 9, line 55 through col. 10, line 10).

Therefore, it would have been obvious to one of ordinary skill in the art, having the teachings of Nguyen and Mitchell before him at the time the invention was made to modify the hierarchical ring menu of Nguyen to include the smaller second ring of Mitchell. One would have been motivated to make such a combination for the advantage of graphically representing as much of a hierarchy as possible to facilitate user manipulation. See Mitchell, col. 3, lines 16-32.

Nguyen and Mitchell fail to explicitly teach wherein said icon displayed at a specific position of said ring is displayed larger than the other icons positioned on the ring. Robbins teaches wherein said icon displayed at a specific position of said ring is displayed larger than the other icons positioned on the ring (i.e. enlarging by not occluding a selected segment through warping controls, by way of graphical manipulations such as the "fish-eye" technique, at col. 5, lines 35-38).

Therefore, it would have been obvious to one of ordinary skill in the art, having the teaching of Nguyen, Mitchell and Robbins before him at the time the invention was made, to modify the displaying of selected icons as taught by Nguyen to include displaying a larger icon that is selected as taught by Robbins with the motivation being to "examine details associated with the selected image," (see col. 6, lines 15-20, 'Robbins).

However, Nguyen, Mitchell, and Robbins, fail to explicitly teach removing detail from the first icons after adding the second icons.

Torres teaches a system of selecting menu items represented by icons similar to that of Nguyen, Mitchell, and Robbins. Furthermore, Torres teaches altering the graphical representation of an icon or related graphical element based on its selection, at col. 4, lines 23-42. At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to include the graphical alteration of Torres, similar to the claimed removing detail from a selected icon, into the system of Nguyen, Mitchell, and Robbins. Applicant has not disclosed that removing detail from the first icons after adding the second icons provides an advantage, is used for a particular purpose, or solves a stated problem. One of ordinary skill in the art, furthermore, would have expected Applicant's invention to perform equally well with the icon attribute alteration of Torres because the icon alteration in Torres and in the instant application

both are a result of user selection of an icon or graphical element and are both used to indicate such a selection.

One would have been motivated to make such a combination for the advantage of easily indicating to a user which icons or elements in a hierarchy have been previously selected.

However, Nguyen, Mitchell, Robbins, and Torres fail to explicitly teach automatically centering the selected icon on the picture screen.

Vayda teaches a ring menu system similar to that of Nguyen, Mitchell, Robbins, and Torres (see Vayda, Fig. 11). Furthermore, Vayda teaches automatically centering the selected icon on the picture screen, taught as the positioning of the item highlighter in the focus or default position of col. 13, lines 18-23. While Vayda discloses at col. 6, lines 46-48 that the focus position need not be the center of an object, this passage clearly indicates that a focus position as centering is commonly utilized in the art and not out of the realm of Vayda.

Therefore, it would have been obvious to one of ordinary skill in the art, having the teachings of Nguyen, Mitchell, Robbins, Torres and Vayda before him at the time the invention was made to modify the ring menu system of Nguyen, Mitchell, Robbins, and Torres to include the full-screen enlargement of Vayda. One would have been motivated to make such a combination for the advantage of allowing a user to more efficiently manipulate the user interface. See Vayda, col. 1, lines 46-49.

Nguyen, Mitchell, Robbins, Torres, and Vayda fail to explicitly teach reducing a size of the primary icons after adding the secondary icons. Os teaches an animated display similar to that of Nguyen, Mitchell, Robbins, Torres, and Vayda. Furthermore, Os teaches a display of secondary selection areas (menu items) that includes reducing the size of previously displayed first selection areas, at col. 2, line 57 through col. 3, line 17.

Therefore, it would have been obvious to one of ordinary skill in the art, having the teachings of Nguyen, Mitchell, Robbins, Torres, Vayda and Os before him at the time the invention was made to modify the interface of Nguyen, Mitchell, Robbins, Torres, and Vayda to include the unselected menu size reduction feature of Os, in order to obtain a menu system that allows for reducing a size of the primary icons after adding the secondary icons.

One would have been motivated to make such a combination for the advantage of creating appropriate space on a display space for bettering the display of information of interest. See Os, col. 3, lines 7-10, and col. 2, lines 13-15.

Nguyen, Mitchell, Robbins, Torres, Vayda, and Os fail to explicitly teach automatically reducing a size of the remaining primary icons, the reduction in size of any one remaining primary icon determined in accordance with a number of predetermined intervals on the first ring between the any one remaining primary icon and the highlighted second icon.

Tanaka teaches a menu system utilizing two icon rings similar to the system of Nguyen, Mitchell, Robbins, Torres, Vayda, and Os. Furthermore, Tanaka teaches displayed primary icons being reduced in size in accordance with a distance interval from a remaining primary icon and a highlighted second icon (as can be seen in the example of Fig. 43 and Fig. 56, where primary lettered icon ring has "A" selected, and secondary numerical icon ring has "1" selected. The further primary icons "B" and "C" are reduced in size based on a difference interval (i.e. "B" is closer to "A" than "C", and is thus displayed larger, as in Fig. 56) from the selected icons.

Therefore, it would have been obvious to one of ordinary skill in the art, having the teachings of Mitchell, Robbins, Torres, Vayda, Os, and Tanaka before him at the time the invention was made to modify the menu system of Mitchell, Robbins, Torres, Vayda, and Os to include the primary icon size reduction of Tanaka, in order to obtain a menu system that allows for automatically reducing a size of the remaining primary icons, the reduction in size of any one

remaining primary icon determined in accordance with a number of predetermined intervals on the first ring between the any one remaining primary icon and the highlighted second icon.. One would have been motivated to make such a combination for the advantage of allowing a user to easily input desired commands from a great number of available commands on a display. See Tanaka, col. 1, lines 55-67.

Mitchell, Robbins, Torres, Vayda, Os, and Tanaka fail to explicitly teach wherein one of the primary icons displayed on the first ring corresponds to the operation of returning to a display including a previous menu layer.

Land teaches a computer implemented system and method that includes user-selectable icons similar to that of Mitchell, Robbins, Torres, Vayda, Os, and Tanaka. Furthermore, Land teaches wherein the selection of one of said user-selectable icons returns the user to a previous level in a displayed hierarchy, at col. 22, lines 20-25.

Therefore, it would have been obvious to one of ordinary skill in the art, having the teachings of Mitchell, Robbins, Torres, Vayda, Os, Tanaka, and Land before him at the time the invention was made to modify the user interface of Mitchell, Robbins, Torres, Vayda, Os, and Tanaka to include the hierarchy traversal icon of Land, in order to obtain a user interface wherein one of the primary icons displayed on the first ring corresponds to the operation of returning to a display including a previous menu layer.

One would have been motivated to make such a combination for the advantage of allowing a user to traverse an object hierarchy (i.e. menu hierarchy) in a "convenient way". See Land, col. 22, lines 20-25.

Independent claim 5 further recites enlarging the second ring. Mitchell teaches a zooming feature upon selection of a hierarchical node, at col. 9, lines 55-65, which inherently

enlarges the second ring on the display. Independent claim 5 further recites similar limitations as independent claim 1 and as such is similarly rejected.

Regarding claims 9 and 10, Nguyen can be shown to teach highlighting the first ring when performing selections on the first ring, taught by the arrows of Fig. 7-9.

Regarding claim 11 and 13, Robbins teaches the displayed primary icons of the first ring that are closer to the highlighted icon being larger than the displayed primary icons of the first ring that are further from the highlighted icon, taught as the use of a "fisheye" technique focused on a selected icon, at col. 5, lines 35-38, which is well-known to warp an image such that the focused part is enlarged relative to portions of the image further from the focused portion.

Regarding claim 12 and 14, Vayda teaches removing the remaining plurality of icons on the first ring from the picture screen, at col. 13, lines 18-23.

Response to Arguments

Applicant's arguments with respect to claims 1, 5, and 9-14 have been considered but are moot in view of the new ground(s) of rejection.

The examiner further notes that Applicant has erroneously indicated the status of pending claims on pages 10 and 11 of the remarks (i.e. "Applicants therefore request that the rejection of claims 1, 4, 5, and 8-14 under 35 USC 103(a) be withdrawn"). As claims 4 and 8 have been cancelled, the examiner has chosen to interpret such statements as pertaining to pending claims 1, 5, and 9-14.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MICHAEL ROSWELL whose telephone number is (571)272-4055. The examiner can normally be reached on 9:30 - 6:00 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chat Do can be reached on (571) 272-3721. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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